Index

Volume 33, 1980

A

Aboveground biomass dynamics of blue grama in a shortgrass steppe and evaluation of a method for separating live and dead, 210

Accuracy of roughage intake estimations as determined by a chromic oxide-in vitro digestibility technique (tech note), 237

Adventitious root development in blue grama seedlings, 323

Alderfer-Findley, Jean, 278

Amino acid composition of rough fescue, 295

An aspect of feeding behavior and its importance to grazing systems, 426

Anderson, Murray L., 37 Anderson, D.M., 217

Anderson, D.M., (tech note), 316

Animal reproduction—principles and practices (book review), 319

Application of the universal soil loss equation to rangelands on a per-storm basis, 66

Atrazine, effects of on protein content of Oklahoma tallgrass, prairie, 404 Austin, Dennis D., 275

B

Bailey, Arthur W., 37
Baker, R.L., 404
Balph, David F., 426
Barbwire Russian thistle, 169
Batchelder, Arthur R., 435
Bayn, Robert L., 300
Beaty, E.R., 49
Beck, Reldon F., 394
Beetle, A.A. 256
Bellows, R.A. (book review), 319
Big sagebrush habitat types 278

Big sagebrush habitat types, 278 Bit sagebrush, seasonal differences in the element content of, 374

Big sagebrush, spraying with 2,4-D causes negligible stream contamination (tech note), 311

Biomass dynamics of blue grama in a shortgrass steppe and evaluation of a method for separating live and dead, 210

Biomass relations of Xanthocephalum sarothrae (Pursh) Shinners on sandy soils in southern New Mexico, 394

Bitterbrush seedlings, emergence of, on land disturbed by phosphate mining, 439

Bjugstad, A.J., 244 Blackburn, Wilbert H., 79

Black-tailed jackrabbit diet and density on rangeland and near agricultural crops, 229 Blue grama, 210 Blue grama, strains evaluated for the Southern Great Plains, 381

Bonham, Charles D., 390 Booth, D. Terrance, 439

Bourne, John, 385 Briske, D.D., 323

Broadcast burning of sagebrush in the winter, 233

Broersma, K., 197

Brooke, B., 286

Brotherson, Jack D., 183, 367

Brunner, Allen D., 446

Brush cover and white-tailed deer densities on the Rio Grande plain, 328

Bryant, F.C., 410

Buckhouse, John C., 282

Burning, effects of season and frequency on a phryganic rangeland in Greece, 251

C

Cable, Dwight R., 9

Carbohydrates, nonstructural, in roots of Gambel oak sprouts following herbicide treatment, 390

Carbohydrate reserves of perennial ryegrasss, 200

Carpenter, Len H., 318

Cartwright, T.C., 174

Cattle diets on summer range in British Columbia, 55

Changes in diet and nutrition with increased herd size in Texas whitetailed deer, 28

Changes in mountain big sagebrush habitat type following spray release, 278
Chemical composition of the sandlily
(Leucocrinum montanum), 455

Chemical water quality, impact of incremental surface soil depths on infiltration rate, 186

Clark, M.B., 213

Classification and ordination of seral plant communities, 179

Clearcut-logged areas, 213

Cogswell, C., 47

Competition and sex ratio of shadscale (tech. note), 236

Contour furrows, 221

Control of bitterweed with herbicides, 465

Correlation of environmental factors with nitrate concentrations in meadow plants, 223

Cox, Jerry R., 457

Crown temperature of Whitmar wheatgrass as influenced by standing dead material (tech. note), 314

Curlleaf mountain mahogany, 275

Cyanogenic glycoside levels in saskatoon serviceberry, 197

D

Dahl, B.E., 442 Davis, J. Berry, 446 Davis, James N., 367

Decomposition of native herbage and filter paper at five meadow sites in Sequoia National Park, California, 262

Deer and cattle diets on summer range in British Columbia, 55

Deer nutrition studies, a fecal collection apparatus for, 398

Defoliation of herbaceous plants by sheep in a foothill range community in northern Utah, 164

Diameter—age relationships of two species of mountain mahogany, 367

Dickinson, C.E., 210

Diet and nutrition with increased herd size in Texas white-tailed deer, 28

Diets, deer and cattle, on summer range in British Columbia, 55

Diet selection by cattle under highintensity low-frequency, short duration, and Merrill grazing systems, 428

Distance traveled, relationship with diet and weather for Hereford heifers, 217 Dodd, J.L., 210

Dorrance, Michael J., 385

Double-sampling estimators of subalpine herbage production, 300

Drawe, D. Lynn, 28

Drought effects on adventitious root development in blue grama seedlings, 323

E

Ecology and utilization of desert shrub rangelands in Iraq (book review), 470 Effects of a fall wildfire on herbaceous vegetation on xeric sites in the Selwaybitterroot wilderness, Idaho, 363

Effects of Atrazine, 2,4-D and fertilizer on crude protein content of Oklahoma tallgrass prairie, 404

Effect of fertilizer and brush control on soil fertility, 408

Effects of grazing and sagebrush control on potential erosion, 451

Effects of increased rainfall on native forage production in eastern Montana, 246

Effects of season and frequency of burning on a phryganic rangeland in Greece, 251

Effects of subsurface irrigation on current and subsequent year's growth in shadscale, 331 Effects of the plains pocket gopher on rangeland, 74

Effects of the subterranean aphid (Geoica utricularia [Passerini]) on forage yield and quality of sand lovegrass, 272

Electric fencing, evaluation of 385 Element content of Wyoming big sagebrush, seasonal differences, 374

El Hassan, Babiker, 200 Elledge, Doak, 428

Emergence of bitterbrush seedlings on land disturbed by phosphate mining,

Engle, David M., 390 Engel, J.L., 49 Erdman, James A., 374

Erosion, effects of grazing and sagebrush control on, 451

Establishment of barbwire Russian thistle in desert environments, 169

Evaluation of anti-coyote electric fenc-

Evaluation of double-sampling estimators of subalpine herbage production,

Evans, Raymond A., 169 Everett, Richard L., 446

Extracts in ponderosa pine needles that produce abortion in mice, 46

Factors influencing magnesium in High Plains forage, 435

Factors influencing microhistological analysis of herbivore diets, 371

Fagerstone, Kathleen, 229 Fairbourn, Merle L., 435

Faix, J.J., 388

Farris, D.E., 174 Fecal collection apparatus for deer nutri-

tion studies, 398 Feeding behavior and its importance to grazing systems, 426

Feral horse demography: a preliminary report, 354

Feral horses, range relationships with wild ungulates and cattle in western Alberta, 266

Fertilizer and brush control, effects on soil fertility, 408

Fetcher, Ned, 35 Findley, Roger R., 278

Fire temperatures in grass, shrub and aspen forest communities of central Alberta, 37

Forage intake in two-year old cows and heifers grazing blue grama summer range, 71

Forage production in eastern Montana,

Forage quality measurements and forage research-a review, critique, and interpretation, 49

Formation of soil material (book review), 240

Foster, M.A., 74 Francis, Richard E. (book review), 470 Freeman, D.C. (tech note), 236

Frequency and extent of defoliation of herbaceous plants in a foothill range community in northern Utah, 164 Fulgham, Kenneth O., 398

Galyean, M.L. (tech. note), 237 Gambel oak sprouts, 390 Gano, K.A., 463 [Geoica utricularia (Passerini)], 273 Geomys bursarius, 74 George Reserve deer herd: population ecology of a k-selected species. (book review), 318 Gifford, Gerald F., 66, 186, 189 Gluesing, Ernest A., 426 Golden-cheeked warbler, habital requirements of, 60 Gomm, F.B., 223 Gough, Larry P., 374 Grasshopper control efforts on Montana rangeland, 297 Grass, trees, and cattle on clearcutlogged areas, 213 Greenwood, Larry, 367 Griffith, Richard E. Jr., 229 Growth patterns and biomass relations of Xanthocephalum sarothrae (Pursh) Shinners on sandy soils in southern

Habital requirements of the goldencheeked warbler: management implications, 60 Hall, J., 286 Harper, K.T. (tech. note), 236 Heady, Harold F., 4 Herbage production, evaluation of double sampling estimators of, 300 Herbage yields from a clayey range site 10 and 11 years after severe renova-

tion, 379 Hewitt, George B., 297 Hinds, F.C., 388 Hironaka, M., 179

New Mexico, 394

Historical perspectives on range burning in the Inland Pacific Northwest, 415 Hodgkinson, Ken C., 164

Holechek, J.L., 371 Howard, Volney W., Jr., 457 Hubbard, Kenneth G., 360 Hudson, R.J., 266

Huschle, Gary, 179

Impact of incremental surface soil depths on infiltration rates, potential sediment losses, and chemical water quality, 186 Impact of incremental surface soil depths

on plant nitrogen, transpiration ratios, and nitrogen mineralization rates, 189 Impact of intensity and season of grazing on carbohydrate reserves of perennial ryegrass, 200

Increased rainfall, effects on native forage production in eastern Montana,

Indian ricegrass, 204

Inexpensive tool for unrolling barbed wire (tech. note), 79

Infiltration rates on rootplowed rangeland, 423

Infiltration rates, potential sediment losses, and chemical water quality, impact of incremental surface soil depths on, 186

Influence of climate on annual production of seven cold desert forage species,

Influence of fertilizer, aspect, and harvest date on chemical constituents and in vitro digestibility of tall fescue, 244

Influence of natural mulch on forage production on differing California annual range sites, 4.

Inluence of simulated grazing (clipping) on pinegrass growth, 286

Intake estimations, accuracy of as determined by a chromic oxide-in vitro digestibility technique, 237

Intensity and season of grazing, impact on carbohydrate reserves of perennial ryegrass, 200

Jackrabbit diet and density on rangeland and near agricultural crops, 229 James, Lynn F., (book review), 318 Jaynes, Chester C., 381 Johnson, C.W., 451 Johnson, Patricia S., 331 Johnston, A., 295

Kaiser, C.J., 388 Kaldy, M.S., 295 Kamstra, L.D., 46 Kerr, Richard M., (book review), 470 Kie, John G., 28 Kindler, S.D., 273 Kirby, Donald R., 207 Kitchen, Lynn M., 349 Knight, Robert W., (tech. note), 79 Kothmann, M.M., 217, 410, 428 Kroll, James C., 60 Krueger, William C., 200

Lauenroth, W.K., 210 Lavoie, G. Keith, 229 Le Houerou, H.N., 41 Leucocrinum montanum, chemical composition of, 445 Lewis, Clifford E., 337, 340, 345 Lowry, D.P. (tech. note), 312 Lyons, Steven M., 186, 189

McCawley, P.F., 442 McKell, C.M., 460 McLean, A., 55, 213, 286 McMurphy, W.E., 408

Magnesium in high plains forage, factors influencing, 435

Malechek, John C. (tech note), 398 Management of wind ungulate habitat in the western United States and Canada: a review, 16

Mattison, Jeffrey L., 282 Moy, Richard M., 246 Majak, W., 197 Mayland Henry F., 363 Merrill, Evelyn H.L., 363 Merrill, L.B., 410, 428

Method for separating live and dead, 210 Microhistological analysis of herbivore diets, factors influencing, 371

Miller, Richard F., 278

Mineral concentrations in true mountain mahogany and Utah juniper, and in associated soils, 182

Morrison, R.D., 404

Mountain mahogany, diameter-age relationships of two species of, 367

Mulch, influence on forage production on differing California annual range sites, 4

Mutz, J.L., 349, 465

Nadabo, Samu, 394 Neff, Earl L., 221, 292 Nelsen, T.C., 174 Neuenschwander, L.F., 223 Newbauer, John J. III, 246

Nitrate concentration in meadow plants, correlation of environmental factors with, 223

Nitrogen fixation (acetylene reduction) associated with rhizosheaths of Indian ricegrass used in stabilization of the Slick Rock, Colorado tailings pile, 204

Nitrogen mineralization rates impact of incremental surface soil depths on, 189 Nonstructural carbohydrates in roots of Gambel oak sprouts following herbi-

cide treatment, 390 Norton, Brien E., 331

Nutritional characteristics of high yielding exotic grasses for seeding cleared south Texas brushland, 442

Nutritive content of sheep, goat, and white-tailed deer diets on excellent condition rangeland, 410

Oak (Quercus spp.) sprouts growth rates on a central Oklahoma shallow savannah range site (tech note), 312 Ordination of seral plant communities,

Osayande, Solomon T., 182

Papanastasis, Vasilios P., 251 Peek, James M., 363 Perennial ryegrass, carbohydrate reserves of, 200 Perry, David A., 246 Picloram, susceptibility of selected woody plants to, 349

Pieper, Rex D., 71, 394

Pinegrass growth, influence of simulated grazing (clipping) on, 286

Pitman, William D., 381

Plains pocket gopher (Geomys bursarius), effects on rangeland, 74

Plant phenology as a guide in timing grasshopper control efforts on Montana rangeland, 297

Plant phenology in Galleta-shadscale and Galleta-sagebrush associations, 446

Plant production, transpiration ratios, and nitrogen mineralization rates, impact of incremental surface soil depths on, 189

Plants that poison: an illustrated guide for the American Southwest, (book review), 318

Potential soil erosion of selected habitat types in the high desert region of central Oregon, 282

Powell, J. (tech note), 312

Powell, J., 404

Precipitation, temperature, and herbage relationships for a pine woodland site in northeastern Oregon, 307

Production of seven cold desert forage species, influence of climate on, 35 Probasco, G.E., 244

Pumphrey, F.V., 307

Quinton, D.A., 197

Range burning in the inland Pacific northwest, 415

Rangelands of the Sahel, 41

Range relationsips of feral horses with wild ungulates and cattle in western Alberta, 266

Ratliff, Raymond D., 262

Rauzi, Frank, 379, 455

Reese, Gary A., 300

Relating fire occurrence to weather conditions on the Great Basin rangelands, 360

Relationship between competition and sex ratios of shadscale (tech note), 236 Relationship of distance traveled with diet and weather for hereford heifers, 217

Response of curlleaf mountain mahogany to pruning treatments in northern Utah, 275

Response of wavyleaf oak to nitrogen fertilization, 457

Richardson, Steven, 460

Ritcey, R., 55

Rogers, L.E., 463

Rommann, L.M., 408

Root development in blue grama seedlings, 323

Rosiere, R.E., 71

Rosiere, R.E. (tech note), 237

Rough fescue, amino acid composition of, 295

Russian thistle, 169

Sagebrush, broadcast burning in the winter. 233

Sahel, rangelands of the, 41

Salter, R.E., 266

Salt tolerance of two saltbush species grown in processed oil shale, 460 Saskatoon serviceberry, cyanogenic

glycoside levels in, 197

Schroeder, Max H. (tech note), 311

Schumaker, G.A., 451 Scifres, C.J., 349, 465

Scott, Gretchen, 28

Scotter, George W., 16

Seasonal differences in the element content of Wyoming big sagebrush, 374 Seasonal patterns of soil water recharge

and extraction on semidesert ranges, 9 Sediment losses, and chemical water quality, impact of incremental surface

soil depths on, 186 Semidesert ranges, seasonal patterns of soil water recharge and extraction on

semidesert ranges, 9 Seral plant communities, classification

and ordination of, 179 Shinn, Dean A., 415

Sideoats grama, strains evaluated for the Southern Great Plains, 381

Simulated cattle injury to planted slash pine: combinations of defoliation, browsing, and trampling, 340

Simulated cattle injury to planted slash pine: defoliation, 345

Simulated cattle injury to planted slash pine: girdling, 337

Single bayonet gate for trapping range cattle (tech. note), 316

Smith, J.N. (tech note), 316

Smith, J.P., 451

Smith, Michael A., 398

Smoliak, S., 295

Sneva, Forrest A. (tech. note), 314 Snow trapping by contour furrows in

southeastern Montana, 221 Soil erosion of selected habitat types in the high desert region of central

Oregon, 282 Soil ingestion rates of steers following brush management in central Texas,

Soil water recharge and extraction on semidesert ranges, 9

Southward, G. Morris, 457

Spraying of big sagebrush with 2,4-d causes negligible stream contamination (tech note), 311

Steuter, Allen A., 328 Stiegler, J.H., 408

Stritzke, J.F., 404, 408

Stock ponds, using sodium carbonate to seal, 292

Stokes, K.W., 174 Stout, Darryl G., 286

Strains of blue grama and sideoats grama evaluated for the southern Great Plains, 381

Stroehlein, Jack (book review), 240

Stroud, Michael C., 4

Stubbendieck, J., 74 Sturges, David L., (tech. note), 311 Stuth, Jerry W., 207 Susceptibility of selected woody plants to pelleted picloram, 349 Subsurface irrigation, effects on current and subsequent year's growth in shadscale, 331 Subterranean aphid, 272 Sullivan, G.M., 174

Tall fescue, influence of fertilizer, aspect and harvest date on chemical constituents and in vitro digestibility, 244 Tallgrass prairie, 404 Taylor, Charles A., 428 Tool for unrolling barbed wire (tech note), 79 Toxic extracts in ponderosa pine needles that produce abortion in mice, 46 Transforming a traditional forage/livestock system to improve human nutrition in tropical Africa, 174 Transpiration ratios, and nitrogen mineralization rates, impact of incremental surface soil depths on, 189 Trieste, Douglas J., 66 Trlica, M.J., 35

Tromble, John M., 423 Tropical Africa, transforming a traditional forage/livestock system to improve human nutrition in, 174 True mountain mahogany and Utah juniper, 182 Tucker, R., 55 Tueller, Paul T., 446

Ueckert, D.N., 465 Universal soil loss equation, application to rangelands on a per-storm basis, 66 Urness, Philip J., 275 Using sodium carbonate to seal leaky stock ponds in eastern Montana, 292 Utah juniper, 182 Vavra, M., 371 Vivipary, proliferation, and phyllody in grasses, 256 Vogel, K.P., 273

Wallace, Joe D., 71 Wallace, Joe D., (tech note), 237 West, Neil E., 300 Whisenant, S.G., 465 White, Larry N., 246

White-tailed deer, 28 White-tailed deer densities and brush cover on the Rio Grande Plain, 328 Whitmar wheatgrass crown temperature as influenced by standing dead material (tech note), 314 Wildfire, effects on herbaceous vegetation on xeric sites in the Selway-Bitterroot Wilderness, Idaho, 363 Wildlife habitats in managed forests: the Blue Mountains of Oregon and Washington (book review), 470 Wild ungulate habitat in the western United States and Canada: a review, 16 Willms, W., 55 Wilson, A.M., 323 Wolfe, Michael L., 354 Wood, M. Karl., (tech note), 79 Wright, Henry A., 328 Wullstein, L.H., 204

Xanthocephalum sarothrae (Pursh) Shinners, 394

Y Young, James A., 169

Journal of Range Management

Official bimonthly publication of

Society for Range Management

Volume 33, 1980

Table of Contents

Volume 33, 1980

Number 1, January Influence of Natural Mulch on Forage Production on Differing California Annual Range Sites—James W. Bartolome, Michael C. Stroud, and Harold F. Heady Seasonal Patterns of Soil Water Recharge and Extraction on Semidesert Ranges—Dwight R. Cable Management of Wild Ungulate Habitat in the Western United States and Canada: A Review—George W. Scotter Changes in Diet and Nutrition with Increased Herd Size in Texas White-tailed Deer—John G. Kie, D. Lynn Drawe, and Gretchen Scott Influence of Climate on Annual Production of Seven Cold Desert Forage Species—Ned Fetcher and M.J. Trlica Fire Temperatures in Grass, Shrub and Aspen Forest Communities of Central Alberta—Arthur W. Bailey and Murray L. Anderson The Rangelands of the Sahel—H.N. Le Houerou Toxic Extracts in Ponderosa Pine Needles that Produce Abortion in Mice—C. Cogswell and L.D. Kamstra	4 9 16 28 35 37 41 46	Forage Quality Measurements and Forage Research—A Review, Critique and Interpretation—E.R. Beaty and J.L. Engel Deer and Cattle Diets on Summer Range in British Columbia—W. Willms, A. McLean, R. Tucker, and R. Ritcey Habitat Requirements of the Golden-cheeked Warbler: Management Implications—James C. Kroll Application of the Universal Soil Loss Equation to Rangelands on a Per-Storm Basis—Douglas J. Trieste and Gerald F. Gifford Forage Intake on Two-Year Old Cows and Heifers Grazing Blue Grama Summer Range—R.E. Rosiere, Joe D. Wallace, and Rex D. Pieper Effects of the Plains Pocket Gopher (Geomys bursarius) on Rangelands—M.A. Foster and J. Stubbendieck An Inexpensive Tool for Unrolling Barbed Wire—Robert W. Knight, M. Karl Wood, and Wilbert H. Blackburn	49 55 60 66 71 74 79
Number 2, March			
President's Address: SRM's Future—Dreams or Opportunities—Daniel Merkel Long-term Effects of Fire on Cactus in the Southern Mixed Prairie of Texas—Stephen C. Bunting, Henry A. Wright, and Leon F. Neuenschwander New Collections of Range Plants from the Soviet Union—D.R. Dewey and A.P. Plummer Brush Control and Rio Grande Turkeys in North-Central Texas—Dee A. Quinton, Alan Kent Montei, and Jerran T. Flinders Organic Solvent-Soluble Organic Matter from Soils Underlying Native Range and Crested Wheatgrass in Southeastern Alberta, Canada—J.F. Dormaar, A. Johnston, and S. Smoliak Root Distribution in 1- to 48-Year-Old Stripmine Spoils in Southeastern Montana—John W. Wyatt, Douglas J. Dollhopf, and William M. Schafer Responses of Falsemesquite, Native Grasses and Forbs, and Lehmann Lovegrass after Spraying with Picloram—S. Clark Martin and Howard L. Morton Contributions of White Clover to the N,P, and Ca Concentration of Perennial Grasses—James W. Dobson and E.R. Beaty Perennial Grasses and Their Response to a Wildfire in Southcentral Washington—D. W. Uresk, W.H. Rickard, and J.F. Cline Chemical Scazification, Moist Prechilling, and Thiourea Effects on Germination of 18 Shrub Species—N.D. Stidham, R.M. Ahring, J. Powell and P.L. Claypool	104 107 111	Nitrogen Fertilization of Range: Yield, Protein Content, and Cattle Behavior—M.J. Samuel, F. Rauzi, and R.H. Hart The Response of Native Vertebrate Populations to Crested Wheatgrass Planting and Grazing by Sheep—Timothy D. Reynolds and Charles H. Trost Fall and Winter Diets of Feral Pigs in South Texas—J.H. Everitt and M.A. Alaniz Food Habits of the Plains Pocket Gopher on Western Nebraska Rangeland—Dale G. Luce, Ronald M. Case, and J. Stubbendieck Factors Influencing the Feed Intake and Liveweight Change of Beet Cattle on a Mixed Tree Savanna in the Transvaal—Ibo Zimmerman Habitat and Dietary Relationships of the Pygmy Rabbit—Jeffrey S. Green and Jerran T. Flinders Range Grasses and Their Small Grain Equivalents for Wind Erosion Control—Leon Lyles and Bruce E. Allison Bite-count vs Fecal Analysis for Range Animal Diets—Kenneth D. Sanders, Bill E. Dahl, and Gretchen Scott . Microhabitat Relationships of Six Major Shrubs in Navajo National Monument, Arizona—John A. Fairchild and Jack D. Brotherson Seasonal Concentration and Toxicity of Saponins in Alfombrilla—M. Coburn Williams and Luis C. Fierro . Book Reviews	122 126 129 132 136 143 146 156

Number 3, May	,
Frequency and Extent of Defoliation of Herbaceous Plants by Sheep in a Foothill Range Community in Northern Utah— Ken C. Hodgkinson	Book Reviews 240
Number 4, July	
Influence of Fertilizer, Aspect, and Harvest Date on Chemical Constituents and In Vitro Digestibility of Tall Fescue— G.E. Probasco and A.J. Bjugstad	Using Sodium Carbonate to Seal Leaky Ponds in Eastern Montana—Earl L. Neff
Response of Curlleaf Mountain Mahogany to Pruning Treatments in Northern Utah—Dennis D. Austin and Phillip J. Urness 27. Changes in Mountain Big Sagebrush Habitat Types Following Spray Release—Richard F. Miller, Roger R. Findley, and Jean Alderfer-Findley 27. Potential Soil Erosion of Selected Habitat Types in the High Desert Region of Central Oregon—John C. Buckhouse and Jeffrey L. Mattison 28.	Oak (Quercus spp.) Sprouts Growth Rates on a Central Oklahoma Shallow Savannah Range Site—J. Powell and D.P. Lowry

Number 5, September

Number 3, September		
Drought Effects on Adventitious Root Development in Blue Grama Seedlings—D.D. Briske and A.M. Wilson 323 White-Tailed Deer Densities and Brush Cover on the Rio	Factors of Influencing Microhistological Analysis of Herbivore Diets—M. Vavra and J.L. Holechek	371
Grande Plain-Allen A. Steuter and Henry A. Wright . 328	Sagebrush-Larry P. Gough and James A. Erdman	374
The Effects of Subsurface Irrigation on Current and Subsequent Year's Growth in Shadscale—Patricia S. Johnson	Herbage Yields from a Clayey Range Site 10 and 11 Years after Severe Renovation—Frank Rauzi	379
and Brien E. Norton	Strains of Blue Grama and Sideoats Grama Evaluated for the Southern Great Plains—William D. Pitman and Chester C. Jaynes	381
Simulated Cattle Injury to Planted Slash Pine: Combinations of Defoliation, Browsing, and Trampling—Clifford E.	An Evaluation of Anti-Coyote Electric Fencing—Michael J. and Dorrance and John Bourne	
Lewis	Quality, Yield, and Survival of Asiatic Bluestems and an Eastern Gamagrass in Southern Illinois—J.J. Faix, C.J.	
Clifford E. Lewis	Nonstructural Carbohydrates in Roots of Gambel Oak	388
Feral Horse Demography: A Preliminary Report—Michael L. Wolfe, Jr		390
Relating Fire Occurrence to Weather Conditions on the Great Basin Rangelands—Kenneth G. Hubbard	Growth Patterns and Biomass Relations of Xanthocephalum sarothrae (Pursh) Shinners on Sandy Soils in Southern New Mexico—Samu Nadabo, Rex. D. Pieper, and Reldon	
Effects of a Fall Wildfire on Herbaceous Vegetation on Xeric Sites in the Selway-Bitterroot Wilderness, Idaho—Evelyn	F. Beck A Fecal Collection Apparatus for Deer Nutrition Studies—	394
H.L. Merrill, Henry F. Mayland, and James M. Peek . 363 Diameter-Age Relationships of Two Species of Mountain	John C. Malechek, Kenneth O. Fulgham, and Michael A. Smith	
Mahogany—Jack D. Brotherson, James N. Davis, and Larry Greenwood	Book Reviews	400
Number 6, November		
Effects of Atrazine, 2,4-D and Fertilizer on Crude Protein Content of Oklahoma Tallgrass Prairie—R.L. Baker, J. Powell, R.D. Morrison, and J.F. Stritzke	Nutritional Characteristics of High Yielding Exotic Grasses for Seeding Cleared South Texas Brushland—P.F.	
Powell, R.D. Morrison, and J.F. Stritzke	McCawley and B.E. Dahl Plant Phenology in Galleta-Shadscale and Galleta-Sagebrush Associations—Richard L. Everett, Paul T. Tueller, J. Barry	1
Stritzke	Davis and Allen D. Brunner Effects of Grazing and Sagebrush Control on Potential	446
Diets on Excellent Condition Rangeland in Texas—F.C. Bryant, M.M. Kothmann, and L.B. Merrill	Erosion—C.W. Johnson, G.A. Schumaker, and J.P. Smith	
Historical Perspectives on Range Burning in the Inland Pacific Northwest—Dean A. Shinn	Chemical Composition of the Sandlily (Leucocrinum mon- tanum)—Frank Rauzi	
Infiltration Rates on Rootplowed Rangelands—John M. Tromble	Response of Wavyleaf Oak to Nitrogen Fertilization—Volney W. Howard, Jr., Jerry R. Cox, and G. Morris Southward	,
An Aspect of Feeding Behavior and Its Importance to Graz- ing Systems—Ernest A. Gluesing and David F. Balph . 426	***************************************	457
Diet Selection by Cattle under High-Intensity Low- Frequency, Short Duration, and Merrill Grazing Systems—Charles A. Taylor, M.M. Kothmann, L.B. Mer-	Salt Tolerance of Two Saltbush Species Grown in Processed Oil Shale—Steven G. Richardson and C.M. McKell Townsend Ground Squirrel Diets in the Shrub-Steppe of Southcentral Washington—L.E. Rogers and K.A. Gana	460
rill, and Doak Elledge428	Control of Bitterweed with Herbicides—D.N. Ueckert, C.J.	463
Factors Influencing Magnesium in High Plains Forage— Merle L. Fairbourn and Arthur R. Batchelder 435	Scifres, S.G. Whisenant, and J.L. Mutz Book Reviews	465
Emergence of Bitterbrush Seedlings on Land Disturbed by Phosphate Mining—D. Terrance Booth		-770

